

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF PATENT APPEALS & INTERFERENCES**

In re Patent Application of

**Customer No.: 27182**

HUNT, Thomas J. et al.

**Confirmation No.: 3290**

Application No.: 10/668,255

Group Art Unit: 1735

Filed: 09-24-2003

Examiner: STONER, Kiley S.

Title: METHOD FOR BONDING A SPUTTER TARGET TO A BACKING PLATE AND  
THE ASSEMBLY THEREOF      Docket No. 21256

**AMENDED APPEAL BRIEF**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

A Notification of Non-Compliant Appeal Brief was mailed March 4, 2011.

This Appeal Brief has been amended in the SUMMARY OF CLAIMED  
SUBJECT MATTER section to properly map the subject matter of independent  
claims 1 and 18 to the original specification as filed by paragraph number. In  
accordance with the Notification, only the corrected SUMMARY OF CLAIMED  
SUBJECT MATTER section is being submitted herewith.

### **SUMMARY OF THE CLAIMED SUBJECT MATTER**

In accordance with 37 CFR 41.37(c)(1)(v), the following is a concise explanation of the subject matter of the invention.

In one aspect of the invention, and as set forth in independent claim 1, a method for forming a solder bonded sputter target/backing plate assembly is provided. The method includes forming a backing plate with a bonding surface having a plurality of segmented and spaced-apart ridges that are machined and disposed on and within the periphery of the bonding surface of the backing plate. The ridges perform as spacers/standoffs for the supply of solder material between said backing plate and a sputter target. The sputter target is formed from a ferromagnetic material. The sputter target has a sputtering surface and a substantially flat bonding surface. The backing plate and the sputter target have similar coefficients of thermal expansion. Solder material is applied to the interface spaces defined by superimposing said sputter target within the periphery of and onto the plurality of ridges on the backing plate. Solder material is allowed to solidify and bond the sputter target to the backing plate so that the plurality of ridges provide an effective uniform thickness solder bonded interface.

With reference to independent claim 1, see for example, paragraphs [0016]-[0018] and [0024]-[0025] of Appellants' original specification as filed.

In another aspect of the invention, and as forth in independent claim 18, a solder bonded sputter target/backing plate assembly comprising a backing plate having a plurality of segmented spaced-apart ridges machined and disposed on and within the periphery of the bonding surface of said backing plate is provided. The assembly includes ridges which perform as spacers/standoffs upon supplying a solder material between said backing plate and a sputter target. The sputter target is made of a ferromagnetic material. The sputter target has a substantially flat sputter surface and a bond surface. The backing plate and the sputter target have similar coefficients of thermal expansion. The sputter target is superimposed onto the plurality of ridges on the bonding surface of the backing plate. A solder

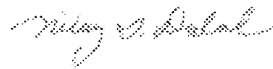
bonded layer is disposed between the sputter target and backing plate and between the ridges to produce an effective uniform thickness solder bonded interface for the sputter target/backing plate.

With reference to independent claim 18, see for example, paragraphs [0016]-[0018] and [0024]-[0025 ] of Appellants' original specification as filed.

### **Conclusion**

The original Appeal Brief and the Petition for Extension of time had been filed on January 24, 2011. Therefore, Applicants believes no further fees are due. Nonetheless, in the event of a deficit, please charge fees/surcharge which may be required by this paper, or credit any overpayment, to Deposit Account No. 16-2440.

Respectfully submitted,



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